

Amendments to the Claims:

Please cancel Claim 14 and amend Claims 1, 8, 9, 12, 13, and 25 as indicated in the following listing of claims, which replaces all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) An optical routing apparatus for directing an optical signal, the optical routing apparatus comprising:
 - (a) an input port configured to provide the optical signal along an input path;
 - (b) a plurality of output ports, each such output port being configured to receive the optical signal along a respective output path that is substantially parallel to and opposite in direction to the input path, wherein at least two of the output ports lie in different parallel planes, each such plane being orthogonal to a the input path ~~along which the optical signal may be received by one of the output ports~~; and
 - (c) an optical switching arrangement adapted to shift among a plurality of distinct optical configurations to direct the optical signal from the input port to one of the output ports.
2. (Original) The optical routing apparatus according to claim 1 wherein all path lengths defined by the distinct optical configurations of the optical switching arrangement from the input port to each output port differ by less than a confocal length of the optical signal.
- 3 . (Original) The optical routing apparatus according to claim 1 wherein all path lengths defined by the distinct optical configurations of the optical switching arrangement from the input port to each output port are approximately equal.
4. (Canceled).

5. (Original) The optical routing apparatus according to claim 1 wherein the optical switching arrangement includes a rotatable mirror off which the optical signal is reflected in at least one of the distinct optical configurations.

6. (Original) The optical routing apparatus according to claim 1 wherein the optical switching arrangement includes a linearly actuated mirror off which the optical signal is reflected in at least one of the distinct optical configurations.

7. (Original) The optical routing apparatus according to claim 1 wherein the optical switching arrangement is configured to direct a plurality of optical signals.

8. (Previously Presented) A method for directing ~~an optical signal~~ light having a plurality of spectral bands, the method comprising:

(a) providing the ~~optical signal~~ light from an input port;
(b) angularly separating the spectral bands with a dispersive element; and
(~~b~~) (c) operating an optical switching arrangement adapted to shift among a plurality of distinct optical configurations to direct ~~the optical signal~~ each of the spectral bands to different ones of a plurality of output ports, wherein at least two of the output ports lie in different parallel planes, each such plane being orthogonal to a path along which ~~the optical signal~~ one of the spectral bands is received by one of the output ports.

9. (Currently Amended) The method according to claim 8 wherein all path lengths defined by the distinct optical configurations of the optical switching arrangement from the input port to each output port differ by less than a confocal length of the ~~optical signal~~ one of the spectral bands.

10. (Original) The method according to claim 8 wherein all path lengths defined by the distinct optical configurations of the optical switching arrangement from the input port to each output port are approximately equal.

11. (Canceled).

12. (Currently Amended) The method according to claim 8 wherein the optical switching arrangement includes a rotatable mirror off which the ~~optical signal~~ one of the spectral bands is reflected in at least one of the distinct optical configurations.

13. (Currently Amended) The method according to claim 8 wherein the optical switching arrangement includes a linearly actuated mirror off which the ~~optical signal~~ one of the spectral bands is reflected in at least one of the distinct optical configurations.

14. (Canceled).

15. (Previously Presented) A wavelength router for receiving, at an input port, light having a plurality of spectral bands and directing subsets of the spectral bands, the wavelength router comprising:

(a) a plurality of output ports for receiving the directed spectral bands, wherein at least two of the output ports lie in different parallel planes, each such plane being orthogonal to a path along which one of the directed spectral bands may be received by one of the output ports;

(b) a free-space optical train disposed between the input port and the output ports providing optical paths for routing the spectral bands, the optical train including a dispersive element disposed to intercept light traveling from the input port; and

(c) an array of optical routing mechanisms having a dynamically configurable routing element, each optical routing mechanism being configured to direct a given spectral band to one of the output ports.

16. (Original) The wavelength router according to claim 15 wherein the dispersive element is a grating.

17. (Previously Presented) The wavelength router according to claim 16 wherein the optical train includes focusing power incorporated into the grating.

18. (Original) The wavelength router according to claim 16 wherein the grating is a reflective grating.

19. (Original) The wavelength router according to claim 16 wherein the grating is a transmissive grating.

20. (Original) The wavelength router according to claim 15 wherein all path lengths for a particular spectral band defined by a given optical routing mechanism from the input port to the output ports differ by less than a confocal length of the particular spectral band.

21. (Original) The wavelength router according to claim 15 wherein all path lengths for a particular spectral band defined by a given optical routing mechanism from the input port to the output ports are approximately equal.

22. (Canceled).

23. (Original) The wavelength router according to claim 15 wherein the dynamically configurable routing element comprises a rotatable mirror off which a given spectral band is reflected in one configuration.

24. (Original) The wavelength router according to claim 15 wherein the dynamically configurable routing element comprises a linearly actuated mirror off which a given spectral band is reflected in one configuration.

25. (Currently Amended) An optical routing apparatus for directing an optical signal, the optical routing apparatus comprising:

(a) an input port configured to provide the optical signal along an input path;
(b) a plurality of output ports, each such output port being configured to receive the optical signal along a respective output path that is substantially parallel to and opposite in direction to the input path, wherein the output ports lie in a common plane orthogonal to the input path and the input port lies outside the common plane; and

(c) an optical switching arrangement adapted to shift among a plurality of distinct optical configurations to selectively direct the optical signal from the input port to the output ports,

wherein no orthogonal separations from the input path to a first of the output paths is an integral multiple of an orthogonal separation from the input path to a second of the output paths different from the first of the output paths.

26. (Previously Presented) The optical routing apparatus recited in claim 25 wherein all path lengths defined by the distinct optical configurations of the optical switching arrangement from the input port to each output port differ by less than a confocal length of the optical signal.

27. (Previously Presented) The optical routing apparatus recited in claim 25 wherein the optical switching arrangement includes a linearly actuated mirror off which the optical signal is reflected in at least one of the distinct optical configurations.